

Attorney Docket No. 03806.0537

Figure 2:

SEQ ID NO: 1

5 ${\underline{\sf GAAGAGTTGATTGAGAAGTGC}}$ CTCTTGGTTAAGGATTAACCACAGGGAAAAATCCAGCAGAAACAG AAGAACTGTGGGTTTCTTACCCCAGCCCTCAAGGAAGCTATGCCGTGAAAGGGGTACTGATACACT GACATACAGCAAGTTGGACGGGGCATCAGTTCTTCATTTGTGGAGTGGAGAAAAGAAGAAGAAATC ${ t TCTCATTTGGGGCATTTGAAGG}$ 10 ${\tt TTGGCTAGGTGTAAAAAGGCAGCCGCTTTGGACACTTGTCTTGATCTTATGGCCAGTCATTATTTT}$ CATAATTTTGGCTATTACTCGGACCAAATTTCCTCCAACTGCAAAACCAACTTGTTACCTCGCACC TCGAAACCTTCCTAGTACTGGATTCTTTCCATTCCTGCAGACCCTACTCTGTGACACAGACTCTAA ATGCAAAGACACCCTATGGCCCACAAGATCTGCTTCGTAGGAAAGGAATTGATGATGCACTATT TAAAGACAGTGAGATTCTGAGAAAGTCATCCAACCTGGATAAGGACAGCAGTTTATCATTCCAGAG CACCCAAGTTCCAGAAAGAAGGCATGCATCACTAGCCACAGTATTTCCCAGTCCAAGTTCTGATTT 15 GGAAATCCCCGGAACATATACTTTCAATGGCAGTCAAGTGCTCGCACGAATTCTTGGCTTGGAAAA GCTGTTAAAGCAAAATTCAACTTCAGAAGATATA<u>CGAAGAGAACTATGTGACAGC</u>TATTCAGGATA $\hbox{\tt CATTGTGGATGATGCCTTCTTGGACCTTTCTA} \overline{\hbox{\tt GGAAGAAATGTTTTAACAAATTTTGCCTTTC}}$ CCCCAACAATCAGAAGATAGTGTTTCAGGAAATAGTCAGAATGCTGTCTTT<u>CTTCTCACAAGTGCA</u> $\overline{ ext{AGAGC}}$ AGAAAGCTGTGTGGCAGCTTCTGTCTAGTTTTCCAAATGTGTTTCAGAATGACACATCACT AAGCAATCTATTTGATGTTCTTCGAAAGGCAAACAGTGTGCTGCTGGTTGTGCAGAAGGTTTATCC ${ t ACGTTTTGCAACTAACGAAGGTTTCAGAACCCTCCAGAAGTCTGTTAAACATCTGCTGTACACTCT}$ GGACTCCCCAGCTCAAGGTGACTCCGATAATATAACGCATGTGTGGAATGAGGATGATGGACAGAC CTTATCTCCAAGCAGTCTGGCTGCACAGCTCCTAATTCTGGAAAACTTTGAAGATGCCCTCTTAAA 25 ${ t CAGAGGTTCACCAGAAAATCTAAGACTCCTGCAGTCCACAATACGATTTAAAAAATCTTTTCTT}{{ t CG}}$ <u>CAATGGTTCCTATGAAGATTAC</u>TTTCCTCCAGTTCCTGAAGTCCTAAAATCAAAACTGTCTCAACT $\overline{ ext{TCGAAACTTGACCGAACTTCTT}}$ $\overline{ ext{TGTGAATCTGAAACTTTCAGTTTGATAGAGAAGTCATGCCAGCT}}$ AGATTTGCTGACTGGAGATCCAAGCAAAATTAATTTAAATATGGATCAGTTTCTAGAACAGGCACT GCAAATGAATTACTTGGAAAATATCACTCAGTTAATACCGATCATAGAAGCCATGCTGCATGTCAA TAACAGTGCAGATGCTTCTGAAAAGCCAGGTCAGTTACTAGAAATGTTTAAAAATGTTGAAGAGCT GAAAGAAGATTTAAGGAGAACAACAGGAATGTCCAACAGGACTATTGACAAGTTGCTGGCCATTCC 35 $\texttt{CATCCCTGATAATAGAGCTGAGATTATTTCTCA} \underline{\texttt{GGTGTTCTGGCTGCATTC}} \texttt{CTGTGATACTAATAT}$ $\hbox{\tt CACCACTCCCAAACTAGAAGATGCAATGAAAGAATTCTGCAACCTGTCTCTTTCAGAGAGATCCCG}$ ${\tt GCA}{\tt GTCTTACCTCATCGGACTCACCCTTCTG}{\tt CACTACTTAAACATTTACAACTTCACAGACAAGGT}$ GTTTTTCCCGAGGAAAGATCAAAAGCCAGTAGAAAAGATGATGGAGCTCTTCATAAGACTAAAAGA GATTCTCAATCAGATGGCTTCTGGCACACATCCGCTGCTAGACAAAATGAGATCCCTGAAGCAAAT 40 AGGATCATTTAGCACCATCTCCCAAGCATTATGTTCTCAAGGAATTACCACTGAATATTTAACTGC TAAAGACATCATTAACATGCCCGCTGGACCTGTGATTTGGGCTTTCTTGAAACCTATGTTGTGGG 45 AAGAATTTTGCATGCACCATATAACCCAGTCACAAAGGCAATAATGGAAAAGTCCAATGTAACTCT ${\tt TTC} \underline{CTTCCATCTGTTAAACCAGG} {\tt CAATTCCAATGCTCCAGAATACTCTAAGGAACCCTTTTGTGCAATTCCAATGCTCTAAGGAACCCTTTTGTGCAATTCCAATGCTCAAGGAACCCTTTTGTGCAATTCAATTCCAATTCAATTCCAATTCCAATTCAATTCAATTCCAATT$ ${\tt AGTTTTTGTAAAGTTCTCCGTGG}{\tt GACTCGATGCTGTTGAACTATTGAAACAGATAGATGAACTCGA}$ 50 TATTCTAAGACTGAAATTAGAGAACAACATTGACATCATCGATCAGCTTAACACACTATCTTCCCT GACAGTAAATATTTCCTCTTGTGTATTATATGACCGTATTCAGGCAGCAAAAACCATAGATGAAAT GGAGAGAGGCTAAAAGGCTCTACAAAAGCAACGAACTCTTTGGAAGTGTTATTTTTAAGCTTCC 55 TATTGAAAGAGCAATCATTGAATTGCAAACTGGAAGGAACTCCCAGGAAATAGCAGTCCAGGTTCA ${f T}_{\hbox{\scriptsize GTGCTTATGGTTGCCTGGG}}{f T}{f T}{f T}{f T}{f T}{f T}{f T}{f T}{f T}{f G}{f C}{f T}{f T}{f G}{f T}{f G}{f T}{f G}{f T}{f G}{f T}{f G}{f T}{f G}{f A}{f A}{$ CCTCCGGCTTCATGAGTACATGAAGATGATGGGTGTGAACTCCTGCAGCCATTTCTTTGCCTGGCT TATAGAGAGTGTTGGATTTTTACTGGTTACCATCGTGATCCTCATCATTATACTCAAGTTTGGCAA 60



TATTCTTCCTAAAACAAATGGGTTCATTTTGTTCCTGTATTTTTCGGACTACAGCTTCTCGGTTAT ${\underline{CATCTACATCATTGCC}}$ TTCTTTCCATTTATTGTTCTGGTTACAGTGGAGAATGAGTTGAGCT ${\overline{ATGT}}$ ATTGAAAGTGTTCATGAGCCTGCTGTCCCCAACAGCATTCAGCTATGCAAGCCAATACATTGCACG ATACGAAGAACAGGGCATTGGTCTTCAGTGGGAAAATATGTACACCTCCCGGTTCAGGATGACAC GTATGTCAGGAATGTCTTCCCAGGGACATACGGTATGGCAGCTCCCTGGTATTTTCCAATTCTTCC ${\tt TTCCTATTGGAAGGAGCGATTTGGGTGTGCAGAGGTGAAGCCTGAGAAGAGCAATGGCCTCATGTT}$ TACTAACATCATGATGCAGAACACCAACCCATCTGCCAGTCCTGAATACATGTTTTCCTCTAACAT CGAGCCTGAACCTAAAGATCTCACAGTCGGGGTTGCCCTGCATGGGGTCACAAAGATCTATGGCTC 10 AAAAGTTGCTGTTGATAACCTCAATCTGAACTTTTATGAAGGGCATATTACTTCATTGCTGGGGCC CAATGGAGCTGGGAAAACTACTACCATTTCCATGTTAACTGGGCTGTTTGGGGCCTCAGCAGGCAC $\texttt{CATTTTTGTATATGGAAAAGATATCAAAACAGA} \underline{\texttt{CCTACACACGGTACGGAAGAACATG}} \\ \texttt{GGAGTCTG}$ TATGCAGCACGACGTCTTGTTCAGTTACCTCACTACTAAGGAGCACCTTCTCCTATATGGTTCCAT CAAAGTTCCTCACTGGACTAAAAAGCAGCTCCACGAGGAAGTAAAAAGGACTTTAAAAGATACTGG 15 ${\tt ACTATATA} \underline{\tt GCCATCGTCATAAGAGAGTTGGAACAC} {\tt TGTCAGGAGGCATGAAGAGGAAGTTATCTAT}$ ${f ATCCATAGCTCTCATTGGTGGATCAAGGGTAGTAATTTTGGATGAACCATCTACTGGAGTTGACCC}$ ATGTTCTCGCCGAAGTATATGGGATGTTATATCCAAGAACAAACTGCCAGAACAATCATTCTGTC AACGCACCACTTGGACGAGGCTGAAGTGCTGAGTGACCGCATCGCCTTCCTGGAGCAGGGTGGGCT ${ t TAGGTGCTGTGGGTCCCCATTTTACCTCAAGGAAGCCTTTGGCGATGGGTATCACCTCACGCTTAC}$ 20 ${ t CAAGAAGAAGTCCAAATTTAAAT} { t GCAAATGCAGTATGTGACAC} { t CATGGCCGTGACAGCAATGAT}$ ${\tt CCAATCACATCTCCCGAAGCCTACCTCAAGGAGATATTGGGGGAGAGCTTGTTTATGTACTTCC}$ ${\tt TCCATTCAGCACCAAAGTCTCAGGGGCCTACCTGT} \underline{{\tt CACTCCTACGGGCACTCG}}{\tt ACAATGGCATGGG}$ CAAAGAGTCACAAAAAAATAGTGCTATGAGTCTTGAGCACTTAACACAAAAGAAAATTGGGAATTC 25 TGACAAAATCCTGACAAGAGAGAGAGGCTGGATGGCTTTGGACTGTTGCTGAAGAAGATCATGGC TATACTCATCAAGAGGTTCCACCACACCCGCAGGAACTGGAAAGGTCTCATTGCTCAGGTTATCCT CCCCATCGTCTTTGTTACCACTGCCATGGGCCTTGGCACACTGAGAAATTCCAG<u>CAACAGTTATCC</u> $\overline{ ext{AGAGATTCA}}$ GATCTCCCCCTCTCTTTATGGTACCTCCGAACAGACAGCCTTCTA $\overline{ ext{TGCTAATTATCA}}$ 30 $\overline{\mathtt{CCCGAGCAC}}$ GGAAGCACTTGTCTCAGCAATGTGGGACTTCCCTGGAATTGACAACATGTGTCTGAA CACCAGTGATCTACAGTGTTTAAACAAAGACAGTCTGGAAAAATGGAACACCAGTGGAGAACCCAT CACTAATTTTGGTGTTTGCTCCTGCTCAGAAAATGTCCAGGAATGTCCTAAATTTAACTATTCCCC ACCGCACAGAAGAACTTACTCATCCCAGGTAATTTATAACCTCACTGGGCAACGAGTGGAAAATTA ${ t TCTTATATCAACTGCAAATGAGTTTGTCCAAAAAAGATATGGAGGTTGGAGTTTTGGGCTGCCTTT$ 35 ${\tt GACAAAAGACCTTCGTTTTGATATAACAG} \underline{{\tt GAGTCCCTGCCAATAGAAC}} {\tt ACTTGCCAAGGTATGGTA}$ GCAAGACCAAGAACAAGCCACAATCAGCAGTTTAATCGATATTTTAGTGGCACTGTCTATCTTGAT GGGCTACTCTGTCACCACCGCCAGCTTTGTCACCTATGTTGTAAGGGAACATCAAACCAAAGCCAA 40 $\operatorname{\mathsf{GGTTTTCTACTTGGTGCCTGTAGCGTTTTCAATTGGTATCATTGCGATTTTCAAATTACCTGCATT}$ ${ t CTACAGTGAAAACAACCTAGGCGCTGTATCTCTCCTACTTCTCCTGTTTGGGCATGCAACATTTTC}$ ${ t CTGGATGTACTTGCTGGCTGGGCTCTTCCATGAAACAGGAATGGCCTTCATCACTTACGTCTGTGT}$ 45 GCCTAATGATCCGACTTTAGAACTTATTTCTGAAACCCTCAAGCGCATTTTCCTGATTTTCCCACA ${ t ATTCTGTTTTGGCTACGGTTTGATTGAACTTTCTCAACAACAGTCGGTCCTAGACTTCTTAAAAGC}$ $\texttt{ATATGGAGTGGAATACCCAAATGAAACCTTT} \underline{\texttt{GAGATGAATAAACTAGGTGCAA}} \underline{\texttt{TGTTTGTGGCTTT}}$ $\overline{\text{GGTTTCTCAGGGCACCATGTTTTTTCCTTGCGACTCTTAATCAACGAATCCCTGATAAAGAAACT}}$ 50 CAGGCTTTTCTTCAGAAAATTTAATTCTTCACATGTAAGGGAGACAATAGATGAGGATGAAGATGT ${\tt GCGGGCTGAGAGATTAAGAGTTGAGAGTGGTGCAGCTGAATTTGACTTGGTCCAACTTTATTGTCT}$ CACAAAGACCTACCAACTTATCCACAAAAAGATTATAGCTGTAAACAACATCAGCATCGGGATACC ${\tt TGCTGGAGAGTGTTTTGGGGCTTCTTGGAGTGAATGGAGCAGGAAAGACCACTATATTCAAGATGCT}$ GACAGGAGACATCATTCCTTCAAGTGGAAACATTCTGATCAGAAATAAGACCGGATCTCTGGGTCA CGTTGATTCTCACAGCTCATTAGTTGGCTACTGTCCTCAGGAAGATGCCTTAGATGACCTGGTAAC 55 TGTGGAAGAACATTTGTATTCTATGCCAGGGTACATGGAATTCCAGAAAAGGATATTAAAGAAAC TGTTCATAAACTCCTTAGGAGACTTCACCTGATGCCCTTCAAGGACAGAGCTACCTCTATGTGCAG ${\tt TTATGGCACAAAAAGAAATTATCCACTGCACTGG} \underline{{\tt CCTTGATAGGGAAACCTTC}} {\tt CATTCTACTGCT}$ ${\tt AGTACAGAACAAATGTTCCGTCATCCTCACATCTCACAGCATGGAAGAATGTGAAGCTCTCTGTACC$ ${\tt CAGGTTGGCCATTATGGTGAATGGAAAGTTTCAATGTATTGGATCTTTGCAGCACATAAAGAGCAG}$ GTTTGGACGAGGATTTACTGTCAAAGTTCACTTGAAGAATAACAAAGTGACCATGGAGACCCTCAC

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 $AAAGTTCATGCAGCTGCACTTTCCAAAAACATACTTAAAAGATCAGCACCTCAGCATGCTAGA<math>\underline{GTA}$ TCATGTACCAGTCACAGCAGGAGGAGTCGCAAACATTTTTGATCTGCTGGAAACCAACAAGACTGC ${f TTTAAATATTACAAATTTCTTAGTGAGTCAGACCACTCTGGAAGAGGTTTTCATCAACTTTGCCAA}$ $\underline{AGACCAGAAGTCCTATGAAACTGC} \\ TGATACCAGCAGCCAAGGTTCCACTATAAGTGTTGACTCACA$ $oxed{\mathsf{AGATGACCAGATGGAGTCT}} oxed{\mathsf{TAACACTTCCAGCAAACTCAATCTCAGCGTGTGACCAATGGCTTCAT}}$ TTTGAAGAAAGCCACAGAAGATACACTTCCGCAAGATATCTTCATTTTAAAGTAAAGTAATATAC ${\tt TGTATGGAAAGTTACAACTGTGTTAGACTAACAAGTAATTATAAAAGGAAATTTTTCCTTCTAAGG}$ ${ t TCAGTGAGTGTTGTTGCTACTGAAATGAATTCCTGTATACTCAACACTGTGAGCA}{ t TGCTAATGTAT}$ $\underline{\text{ATGCTGGTG}}$ ATTCTTATGCAAAGGTGAAGCCACCTCAAGATGAATATCTTAATTTACTTTC $oldsymbol{AA}$ TAAAAAGACAGTTTAAAAAGGCATGGATTTTGGTAGTTGAAATATAA<u>GAGTGGAGAAGAAAAGTCAG</u> AACATCATCATGAATACATGAATCGGCTGTGATGTGTGAACTGCTAAGGGCCAAATGAACGTTTGN AGAGCAGTGGGCACAATGTTTACAATGTATGNGTATGTCACTTTCGGTACCNGTGAATGCATGGGG ${\tt ACGTGCTGAACCCGAAAAAAGTGCCTTTCCATAAGGACTGCAATAGAGAGGGCAATTTACCCTGG}$ <u>AAATCACTTGCTCTGGG</u>GGGAAGGGAGGGGGAATGGGTGTCAGCTGGGTAGATACAAACCCTG AAAAGAGAATCCATGTGCTNCTGGCAGGCAACATTTTTTAAAGCTCTTTCAGAAACCCTCATATTT GGGGTTTCTTTTCAGGAAACATTCCTGTGGAGGGAAAACGAATATGAAGATAATTTTCAGCTAATT ATCTGGGTGACCCAGAATCGTGTATATGGCTATAGGATAGACTTCTTAATAATGGCAAGTGACGTG AGCTTTGGCATGACTGTTTGTCTCGAAAACC**AATAAA**CTCAAAGTTTAGAAAAAACTCAAAAAAAA



Figure 3

SEQ ID NO: 2

GAAGAGTTGATTGAGAAGTGCCTCTTGGTTAAGGATTAACCACAGGGAAAAATCCAGCAGAAAC AGAAGAACTGTGGGTTTCTTACCCCAGCCCTCAAGGAAGCTATGCCGTGAAAGGGGTACTGATA CACTGACATACAGCAAGTTGGACGGGGCATCAGTTCTTCATTTGTGGAGTGGAGAAAAAGAAGAG ${ t GAAATCTCTCATTTGGGGCATTTGAAGG} { t ATG} { t GCTTCCCTGTTTCATCAGCTTCAGATCCTGGTC}$ ${\tt TGGAAAAATTGGCTAGGTGTAAAAAGGCAGCCGCTTTGGACACTTGTCTTGATCTTATGGCCAG}$ TCATTATTTTCATAATTTTGGCTATTACTCGGACCAAATTTCCTCCAACTGCAAAACCAACTTG 10 ${\tt TTACCTCGCACCTCGAAACCTTCCTAGTACTGGATTCTTTCCATTCCTGCAGACCCTACTCTGT}$ GACACAGACTCTAAATGCAAAGACACACCCTATGGCCCACAAGATCTGCTTCGTAGGAAAGGAA TTGATGATGCACTATTTAAAGACAGTGAGATTCTGAGAAAGTCATCCAACCTGGATAAGGACAG CCCAGTCCAAGTTCTGATTTGGAAATCCCCGGAACATATACTTTCAATGGCAGTCAAGTGCTCG CACGAATTCTTGGCTTGGAAAAGCTGTTAAAGCAAAATTCAACTTCAGAAGATATACGAAGAGA ${\tt ACTATGTGACAGCTATTCAGGATACATTGTGGATGATGCCTTCTCTTGGACCTTTCTAGGAAGA}$ AATGTTTTTAACAAATTTTGCCTTTCTAACATGACCCTTTTAGAGTCTTCTCCCAAGAACTAA ACAAACAGTTCTCCCAGCTATCCAGTGACCCCAACAATCAGAAGATAGTGTTTCAGGAAATAGT ${\sf CAGAATGCTGTCTTCTCACAAGTGCAAGAGCAGAAAGCTGTGTGGCAGCTTCTGTCTAGT}$ 20 ${\tt CCTCCAGAAGTCTGTTAAACATCTGCTGTACACTCTGGACTCCCCAGCTCAAGGTGACTCCGATCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCCAGCTCAAGGTGACTCCCGATCTCCGATCTCCGATCTCCGATCTCCGATCTCCCAGCTCAAGGTGACTCCCGATCTCCCAGCTCAAGGTGACTCCGATCTCCGATCTCCCAGCTCAAGGTGACTCCCGATCTCCAGATCTCCCCAGCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTCAAGGTGACTCCCGATCTAAGGTGACTCCCGATCTAAGGTGACTCCCGATCTAAGATCTCCGATCTAAGATCTAAGATCTAAGATCTAAGATCTAAGATCTAAGATCTAAGATCTAAGATCTAAGATCAAGAT$ AGCTCCTAATTCTGGAAAACTTTGAAGATGCCCTCTTAAATATATCAGCAAATAGTCCTTATAT 25 TCCTTACTTGGCATGTGAGAAATGTGACTGACAGTTTGGCCAGAGGTTCACCAGAAAATCTA AGACTCCTGCAGTCCACAATACGATTTAAAAAATCTTTTCTTCGCAATGGTTCCTATGAAGATT ACTTTCCTCCAGTTCCTGAAGTCCTAAAATCAAAACTGTCTCAACTTCGAAACTTGACCGAACT TCTTTGTGAATCTGAAACTTTCAGTTTGATAGAGAAGTCATGCCAGCTCTCTGATATGAGCTTT GGGAGCCTGTGTGAAGAAAGTGAGTTTGATCTGCAACTCCTCGAAGCGGCAGAGCTGGGCACCG 30 AAATAGCAGCCAGCTTACTGTACCATGACAATGTCATATCTAAAAAAGTGAGAGATTTGCTGAC TGGAGATCCAAGCAAAATTAATTTAAATATGGATCAGTTTCTAGAACAGGCACTGCAAATGAAT TACTTGGAAAATATCACTCAGTTAATACCGATCATAGAAGCCATGCTGCATGTCAATAACAGTG CAGATGCTTCTGAAAAGCCAGGTCAGTTACTAGAAATGTTTAAAAATGTTGAAGAGCTGAAAGA AGATTTAAGGAGAACAACAGGAATGTCCAACAGGACTATTGACAAGTTGCTGGCCATTCCCATC 35 CCTGATAATAGAGCTGAGATTATTTCTCAGGTGTTCTGGCTGCATTCCTGTGATACTAATATCA CCACTCCCAAACTAGAAGATGCAATGAAAGAATTCTGCAACCTGTCTCTTTCAGAGAGATCCCG GCAGTCTTACCTCATCGGACTCACCCTTCTGCACTACTTAAACATTTACAACTTCACAGACAAG GTGTTTTTCCCGAGGAAAGATCAAAAGCCAGTAGAAAAGATGATGGAGCTCTTCATAAGACTAA AAGAGATTCTCAATCAGATGGCTTCTGGCACACATCCGCTGCTAGACAAAATGAGATCCCTGAA 40 GCAAATGCATCTGCCCAGAAGTGTTCCATTAACACAGGCAATGTACAGAAGCAACCGAATGAAC ACACCACAAGGATCATTTAGCACCATCTCCCAAGCATTATGTTCTCAAGGAATTACCACTGAAT ${\tt ATTTAACTGCCATGCTGCCCTCTTCCCAGAGGCCAAAAGGCAACCACCAAGGATTTTTTGAC}$ TTATAAATTAACTAAAGAGCAAATTGCTTCAAAATATGGAATTCCCATAAATACCACACCATTT TGCTTCTCCCTTTATAAAGACATCATTAACATGCCCGCTGGACCTGTGATTTGGGCCTTTCTTGA 45 AACCTATGTTGTTGGGAAGAATTTTGCATGCACCATATAACCCAGTCACAAAGGCAATAATGGA AAGTCGCCACTTTTCATGAATTCCTTCCATCTGTTAAACCAGGCAATTCCAATGCTCCAGAATA $\tt CTCTAAGGAACCCTTTTGTGCAAGTTTTTGTAAAGTTCTCCGTGGGACTCGATGCTGTTGAACTTGTAAGTTCTCCGTGGGACTCGATGCTGTTGAACTTGTAAGGTTCTCTGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTCTGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTCTGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTCTGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTCTGGGGACTCGATGCTGTGAACTTGTAAGGTTCTCTGGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTCTGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTTGTAAGGTTCTCTGGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTTGTAAGGTTCTCTCGTGGGGACTCGATGCTGTTGAACTTGTAAGGTTCTTGTAAGGTTCTTGTAAGGTTGTAAGGTTGTAAGGTTGTAAGGTTGTAAGGTTGTGTAAGGTTTGTAAGGTAAGGTTGTAAGGTTGTAAGGTTGTAAGGTAAGGTTAAGGTTAAGGTTAAGGTTAAGGTTAAGGTAAGGTTAAGGTAAGGTTAAGGTTAAGGTTAAGGTAAGGTTAAGG$ ATTGAAACAGATAGATGAACTCGATATTCTAAGACTGAAATTAGAGAACAACATTGACATCATC 50 GATCAGCTTAACACACTATCTTCCCTGACAGTAAATATTTCCTCTTGTGTATTATATGACCGTA TTCAGGCAGCAAAAACCATAGATGAAATGGAGAGAGAGGCTAAAAGGCTCTACAAAAGCAACGA ACTCTTTGGAAGTGTTATTTTAAGCTTCCTTCTAACAGAAGCTGGCACAGAGGCTATGACTCT GGAAATGTCTTTCTTCCTCCTGTCATAAAATATACCATCCGGATGAGTCTCAAGACCGCACAGA CCACAAGAAGCCTAAGAACCAAGATTTGGGCTCCAGGGCCACAATTCTCCATCACAAACCA 55 GATCTATGGCAGGGCTTTTATTTATTTACAGGATAGTATTGAAAGAGCAATCATTGAATTGCAA ACTGGAAGGAACTCCCAGGAAATAGCAGTCCAGGTTCAAGCAATTCCTTATCCCTGCTTCATGA ${\tt AAGACAACTTCCTAACCAGTGTCTCTTATTCTCTTCCAATTGTGCTTATGGTTGCCTGGGTTGT}$ ATTTATAGCTGCCTTTGTAAAAAAGCTTGTCTATGAGAAAGACCTCCGGCTTCATGAGTACATG AAGATGATGGGTGTGAACTCCTGCAGCCATTTCTTTGCCTGGCTTATAGAGAGTGTTGGATTTT 60

TACTGGTTACCATCGTGATCCTCATCATTATACTCAAGTTTGGCAATATTCTTCCTAAAACAAA



 ${\tt TGGGTTCATTTTGCTATTTTTCGGACTACAGCTTCTCGGTTATTGCCATGAGCTATCTT}$ ATCAGTGTCTTCTTCAACAACACCCAACATTGCAGCTCTGATCGGAAGCCTCATCTACATCATTG CATGAGCCTGCTGTCCCCAACAGCATTCAGCTATGCAAGCCAATACATTGCACGATACGAAGAA CAGGGCATTGGTCTTCAGTGGGAAAATATGTACACCTCCCGGTTCAGGATGACACCACCTCAT TATTGGAAGGAGCGATTTGGGTGTGCAGAGGTGAAGCCTGAGAAGAGCCAATGGCCTCATGTTTA CTAACATCATGATGCAGAACACCAACCCATCTGCCAGTCCTGAATACATGTTTTCCTCTAACAT CGAGCCTGAACCTAAAGATCTCACAGTCGGGGTTGCCCTGCATGGGGTCACAAAGATCTATGGC TCAAAAGTTGCTGTTGATAACCTCAATCTGAACTTTTATGAAGGGCATATTACTTCATTGCTGG GGCCCAATGGAGCTGGGAAAACTACTACCATTTCCATGTTAACTGGGCCTGTTTGGGGCCTCAGC AGGCACCATTTTTGTATATGGAAAAGATATCAAAACAGACCTACACACGGTACGGAAGAACATG GGAGTCTGTATGCAGCACGACGTCTTGTTCAGTTACCTCACTACTAAGGAGCACCTTCTCCTAT ATGGTTCCATCAAAGTTCCTCACTGGACTAAAAAGCAGCTCCACGAGGAAGTAAAAAGGACTTT 15 AAAAGATACTGGACTATATAGCCATCGTCATAAGAGAGTTGGAACACTGTCAGGAGGCATGAAG AGGAAGTTATCTATATCCATAGCTCTCATTGGTGGATCAAGGGTAGTAATTTTGGATGAACCAT $\tt CTACTGGAGTTGACCCATGTTCTCGCCGAAGTATATGGGATGTTATATCCAAGAACAAAACTGC$ ${\tt CAGAACAATCATTCTGTCAACGCACCACTTGGACGAGGCTGAAGTGCTGAGTGACCGCATCGCC}$ ATGGGTATCACCTCACGCTTACCAAGAAGAAGGTCTTTCTGAACTTGACCAAAGAGTCACAAAA AAATAGTGCTATGAGTCTTGAGCACTTAACACAAAAGAAAATTGGGAATTCCAATGCCAATGGC ${f T}GACAAGAGGAGAGGGCTGGATGGCTTTGGACTGTTGCTGAAGAAGATCATGGCTATACTCAT$ ${ t CAAGAGGTTCCACCACGCCCGCAGGAACTGGAAAGGTCTCATTGCTCAGGTTATCCTCCCCATC}$ 25 GTCTTTGTTACCACTGCCATGGGCCTTGGCACACTGAGAAATTCCAGCAACAGTTATCCAGAGA TTCAGATCTCCCCCTCTCTTTATGGTACCTCCGNACAGACAGCCTTCTATGCTAATTATCACCC GAGCACGGAAGCACTTGTCTCAGCAATGTGGGACTTCCCTGGAATTGACAACATGTGTCTGAAC ACCAGTGATCTACAGTGTTTAAACAAAGACAGTCTGGAAAAATGGAACACCAGTGGAGAACCCA ${\tt TCACTAATTTGGTGTTTGCTCCTGCTCAGAAAATGTCCAGGAATGTCCTAAATTTAACTATTC}$ 30 ${\tt CCCACCGCACAGAAGAACTTACTCATCCCAGGTAATTTATAACCTCACTGGGCAACGAGTGGAA}$ AATTATCTTATATCAACTGCAAATGAGTTTGTCCAAAAAAGATATGGAGGTTGGAGTTTTGGGC TGCCTTTGACAAAAGACCTTCGTTTTGATATAACAGGAGTCCCTGCCAATAGAACACTTGCCAA GGTATGGTATGATCCAGAAGGCTATCACTCCCTTCCAGCTTACCTCAACAGCCTGAATAATTTC CTTCTGCGAGTTAACATGTCAAAATACGATGCTGCCCGACATGGCATCATCATGTATAGCCATC ACTGTCTATCTTGATGGGCTACTCTGTCACCACCGCCAGCTTTGTCACCTATGTTGTAAGGGAA CATCAAACCAAAGCCAAACAGTTGCAGCACATTTCAGGCATTGGCGTGACATGCTACTGGGTAA CAAACTTCATTTATGACATGGTTTTCTACTTGGTGCCTGTAGCGTTTTCAATTGGTATCATTGC GATTTTCAAATTACCTGCATTCTACAGTGAAAACAACCTAGGCGCTGTATCTCTCCTACTTCTC 40 ${\tt TGGCCTTCATCACTTACGTCTGTGTCAACTTGTTTTTTGGCATTAATTCCATTGTTTCCCTGTC}$ AACAACAGTCGGTCCTAGACTTCTTAAAAGCATATGGAGTGGAATACCCAAATGAAACCTTTGA 45 ${\tt GATGAATAAACTAGGTGCAATGTTTGTGGCTTTGGTTTCTCAGGGCACCATGTTTTTTTCCTTG}$ CGACTCTTAATCAACGAATCCCTGATAAAGAAACTCAGGCTTTTCTTCAGAAAATTTAATTCTT CACATGTAAGGGAGACAATAGATGAGGATGAAGATGTGCGGGCTGAGAGATTAAGAGTTGAGAG TGGTGCAGCTGAATTTGACTTGGTCCAACTTTATTGTCTCACAAAGACCTACCAACTTATCCAC AAAAAGATTATAGCTGTAAACAACATCAGCATCGGGATACCTGCTGGAGAGTGTTTTGGGCTTC 50 TTGGAGTGAATGGAGCAGGAAAGACCACTATATTCAAGATGCTGACAGGAGACATCATTCCTTC ${\tt AAGTGGAAACATTCTGATCAGAAATAAGACCGGATCTCTGGGTCACGTTGATTCTCACAGCTCA}$ ${\tt TTAGTTGGCTACTGTCCTCAGGAAGATGCCTTAGATGACCTGGTAACTGTGGAAGAACATTTGT}$ ${\tt ATTTCTATGCCAGGGTACATGGAATTCCAGAAAAGGATATTAAAGAAACTGTTCATAAACTCCT}$ 55 ${\tt AGAAAATTATCCACTGCACTGGCCTTGATAGGGAAACCTTCCATTCTACTGCTGGATGAGCCGA}$ GCTCTGGCATGGATCCGAAGTCGAAACGGCACCTCTGGAAGATCATTTCAGAAGAAGTACAGAA CAAATGTTCCGTCATCTCACATCTCACAGCATGGAAGAATGTGAAGCTCTCTGTACCAGGTTG GCCATTATGGTGAATGGAAAGTTTCAATGTATTGGATCTTTGCAGCACATAAAGAGCAGGTTTG GACGAGGATTTACTGTCAAAGTTCACTTGAAGAATAACAAAGTGACCATGGAGACCCTCACAAA 60 GTTCATGCAGCTGCACTTTCCAAAAACATACTTAAAAGATCAGCACCTCAGCATGCTAGAGTAT ${\tt CATGTACCAGTCACAGCAGGAGGAGTCGCAAACATTTTTGATCTGCTGGAAACCAACAAGACTG}$





 $\hbox{\tt CTTTAAATATTACAAATTTCTTAGTGAGTCAGACCACTCTGGAAGAGGTTTTCATCAACTTTGC}$ CAAAGACCAGAAGTCCTATGAAACTGCTGATACCAGCAGCCAAGGTTCCACTATAAGTGTTGAC ${\tt TCACAAGATGACCAGATGGAGTCT} {\tt TAA} {\tt CACTTCCAGCAAACTCAATCTCAGCGTGTGACCAATG}$ GCTTCATTTTGAAGAAAAGCCACAGAAGATACACTTCCGCAAGATATCTTCATTTTAAAGTAAA GTAATATACTGTATGGAAAGTTACAACTGTGTTAGACTAACAAGTAATTATAAAAGGAAATTTT TCCTTCTAAGGTCAGTGAGTGTTGTTGCTACTGAAATGAATTCCTGTATACTCAACACTGTGAG CATGCTAATGTATATGCTGGTGATTCTTATGCAAAGGTGAAGCCACCTCAAGATGAATATCTTA ${\tt ATTTATTACTTC} {\tt AATAAA} {\tt AAGACAGTTTAAAAGGCATGGATTTTGGTAGTTGAAATATAAGAG}$ ${\tt TGGAGAAAAAGTCAGATGGTTTGTGGCAGGTGCCACCGGGCAAGCAGACATAATTTATT}$ 10 ${\tt TCCAGAAAACAACAGAATGAACATCATGAATACATGAATCGGCTGTGATGTGAACTGCT}$ AAGGGCCAAATGAACGTTTGNAGAGCAGTGGGCACAATGTTTACAATGTATGNGTATGTCACTT ${\tt TCGGTACCNGTGAATGCATGGGGACGTGCTGAACCCGAAAAAAGTGCCTTTCCATAAGGACTG}$ CAATAGAGAGGGCAATTTACCCTGGTGGTACACGGAACCTAGATTCACTCCTGCCATNCCTTGC GTGTGTCAGCTGGGTAGATACAAACCCTGAAAAGAGAATCCATGTGCTNCTGGCAGGCAACATT ${\tt TTTTAAAGCTCTTTCAGAAACCCTCATATTTGGGGTTTCTTTTCAGGAAACATTCCTGTGGAGG}$ GAAAACGAATATGAAGATAATTTTCAGCTAATTATCTGGGTGACCCAGAATCGTGTATATGGCT ${\tt ATAGGATAGACTTCTTAATAATGGCAAGTGACGTGGCCCTGGGGAAAGGTGCTTTATGTACCGT}$ $\tt GTGTGCGTGTATGTGTATCTATACAAGTTTGTCAGCTTTGGCATGACTGTTTGTCTCGAA$



Figure 4

SEQ ID NO: 3

5 GAAGAGTTGATTGAGAAGTGCCTCTTGGTTAAGGATTAACCACAGGGAAAAATCCAGCAGAAAC AGAAGAACTGTGGGTTTCTTACCCCAGCCCTCAAGGAAGCTATGCCGTGAAAGGGGTACTGATA CACTGACATACAGCAAGTTGGACGGGGCATCAGTTCTTCATTTGTGGAGTGGAGAAAAGAAGAG ${ t GAAATCTCTCATTTGGGGCATTTGAAGG}$ 10 TGGAAAAATTGGCTAGGTGTAAAAAGGCAGCCGCTTTGGACACTTGTCTTGATCTTATGGCCAG TCATTATTTTCATAATTTTGGCTATTACTCGGACCAAATTTCCTCCAACTGCAAAACCAACTTG ${ t TTACCTCGCACCTCGAAACCTTCCTAGTACTGGATTCTTTCCATTCCTGCAGACCCTACTCTGT}$ GACACAGACTCTAAATGCAAAGACACCCCTATGGCCCACAAGATCTGCTTCGTAGGAAAGGAA TTGATGATGCACTATTTAAAGACAGTGAGATTCTGAGAAAGTCATCCAACCTGGATAAGGACAG 15 CCCAGTCCAAGTTCTGATTTGGAAATCCCCGGAACATATACTTTCAATGGCAGTCAAGTGCTCG CACGAATTCTTGGCTTGGAAAAGCTGTTAAAGCAAAATTCAACTTCAGAAGATATACGAAGAGA ACTATGTGACAGCTATTCAGGATACATTGTGGATGATGCCTTCTCTTGGACCTTTCTAGGAAGA AATGTTTTTAACAAATTTTGCCTTTCTAACATGACCCTTTTAGAGTCTTCTCTCCAAGAACTAA ACAAACAGTTCTCCCAGCTATCCAGTGACCCCAACAATCAGAAGATAGTGTTTCAGGAAATAGT 20 ${\tt CAGAATGCTGTCTTTCTCACAAGTGCAAGAGCAGAAAGCTGTGTGGCAGCTTCTGTCTAGT}$ ${\tt TTTCCAAATGTGTTTCAGAATGACACATCACTAAGCAATCTATTTGATGTTCTTCGAAAGGCAA}$ ${\tt ACAGTGTGCTGCTGGTTGTGCAGAAGGTTTATCCACGTTTTGCAACTAACGAAGGTTTCAGAAC}$ CCTCCAGAAGTCTGTTAAACATCTGCTGTACACTCTGGACTCCCCAGCTCAAGGTGACTCCGAT 25 AGCTCCTAATTCTGGAAAACTTTGAAGATGCCCTCTTAAATATATCAGCAAATAGTCCTTATAT TCCTTACTTGGCATGTGTGAGAAATGTGACTGACAGTTTGGCCAGAGGTTCACCAGAAAATCTA AGACTCCTGCAGTCCACAATACGATTTAAAAAATCTTTTCTTCGCAATGGTTCCTATGAAGATT ACTTTCCTCCAGTTCCTGAAGTCCTAAAATCAAAACTGTCTCAACTTCGAAACTTGACCGAACT ${ t TCTTTGTGAATCTGAAACTTTCAGTTTGATAGAGAAGTCATGCCAGCTCTCTGATATGAGCTTT$ 30 GGGAGCCTGTGTGAAGAAAGTGAGTTTGATCTGCAACTCCTCGAAGCGGCAGAGCTGGGCACCG AAATAGCAGCCAGCTTACTGTACCATGACAATGTCATATCTAAAAAAGTGAGAGATTTGCTGAC TGGAGATCCAAGCAAAATTAATTTAAATATGGATCAGTTTCTAGAACAGGCACTGCAAATGAAT TACTTGGAAAATATCACTCAGTTAATACCGATCATAGAAGCCATGCTGCATGTCAATAACAGTG CAGATGCTTCTGAAAAGCCAGGTCAGTTACTAGAAATGTTTAAAAATGTTGAAGAGCTGAAAGA 35 AGATTTAAGGAGAACAACAGGAATGTCCAACAGGACTATTGACAAGTTGCTGGCCATTCCCATC CCTGATAATAGAGCTGAGATTATTTCTCAGGTGTTCTGGCTGCATTCCTGTGATACTAATATCA CCACTCCCAAACTAGAAGATGCAATGAAAGAATTCTGCAACCTGTCTCTTTCAGAGAGATCCCG GCAGTCTTACCTCATCGGACTCACCCTTCTGCACTACTTAAACATTTACAACTTCACAGACAAG $\tt GTGTTTTTCCCGAGGAAAGATCAAAAGCCAGTAGAAAAGATGATGGAGCTCTTCATAAGACTAA$ 40 AAGAGATTCTCAATCAGATGGCTTCTGGCACACATCCGCTGCTAGACAAAATGAGATCCCTGAA GCAAATGCATCTGCCCAGAAGTGTTCCATTAACACAGGCAATGTACAGAAGCAACCGAATGAAC ACACCACAAGGATCATTTAGCACCATCTCCCAAGCATTATGTTCTCAAGGAATTACCACTGAAT ATTTAACTGCCATGCTGCCCTCTTCCCAGAGGCCAAAAGGCAACCACCAAGGATTTTTTGAC TTATAAATTAACTAAAGAGCAAATTGCTTCAAAATATGGAATTCCCATAAATACCACACCATTT 45 ${ t TGCTTCTCCCTTTATAAAGACATCATTAACATGCCCGCTGGACCTGTGATTTGGGCTTTCTTGA}$ AACCTATGTTGTTGGGAAGAATTTTGCATGCACCATATAACCCAGTCACAAAGGCAATAATGGA AAGTCGCCACTTTTCATGAATTCCTTCCATCTGTTAAACCAGGCAATTCCAATGCTCCAGAATA $\tt CTCTAAGGAACCCTTTTGTGCAAGTTTTTGTAAAGTTCTCCGTGGGACTCGATGCTGTTGAACT$ 50 ATTGAAACAGATAGATGAACTCGATATTCTAAGACTGAAATTAGAGAACAACATTGACATCATC GATCAGCTTAACACACTATCTTCCCTGACAGTAAATATTTCCTCTTGTGTATTATATGACCGTA TTCAGGCAGCAAAAACCATAGATGAAATGGAGAGAGAGGCTAAAAAGGCTCTACAAAAGCAACGA ${\tt ACTCTTTGGAAGTGTTATTTTAAGCTTCCTTAACAGAAGCTGGCACAGAGGCTATGACTCT}$ 55 GGAAATGTCTTCCTCCTGTCATAAAATATACCATCCGGATGAGTCTCAAGACCGCACAGA CCACAAGAAGCCTAAGAACCAAGATTTGGGCTCCAGGGCCACACAATTCTCCATCACAAACCA ${\tt GATCTATGGCAGGGCTTTTATTTATTTACAGGATAGTATTGAAAGAGCAATCATTGAATTGCAA}$ ${\tt ACTGGAAGGAACTCCCAGGAAATAGCAGTCCAGGTTCAAGCAATTCCTTATCCCTGCTTCATGA}$ ATTTATAGCTGCCTTTGTAAAAAAGCTTGTCTATGAGAAAGACCTCCGGCTTCATGAGTACATG 60



TACTGGTTACCATCGTGATCCTCATCATTATACTCAAGTTTGGCAATATTCTTCCTAAAACAAA ${\tt TGGGTTCATTTTGTTCCTGTATTTTTCGGACTACAGCTTCTCGGTTATTGCCATGAGCTATCTT}$ ATCAGTGTCTTCTTCAACAACACCAACATTGCAGCTCTGATCGGAAGCCTCATCTACATCATTG CCTTCTTTCCATTTATTGTTCTGGTTACAGTGGAGAATGAGTTGAGCTATGTATTGAAAGTGTT CATGAGCCTGCTGTCCCCAACAGCATTCAGCTATGCAAGCCAATACATTGCACGATACGAAGAA CAGGGCATTGGTCTTCAGTGGGAAAATATGTACACCTCCCGGTTCAGGATGACACCACCTCAT ${\tt TATTGGAAGGAGCGATTTGGGTGTGCAGAGGTGAAGCCTGAGAAGAGCCAATGGCCTCATGTTTA}$ CTAACATCATGATGCAGAACACCAACCCATCTGCCAGTCCTGAATACATGTTTTCCTCTAACAT 10 CGAGCCTGAACCTAAAGATCTCACAGTCGGGGTTGCCCTGCATGGGGGTCACAAAGATCTATGGC TCAAAAGTTGCTGATAACCTCAATCTGAACTTTTATGAAGGGCATATTACTTCATTGCTGG ${\tt GGCCCAATGGAGCTGGGAAAACTACTACCATTTCCATGTTAACTGGGCCTGTTTGGGGCCTCAGC}$ AGGCACCATTTTTGTATATGGAAAAGATATCAAAACAGACCTACACACGGTACGGAAGAACATG GGAGTCTGTATGCAGCACGACGTCTTGTTCAGTTACCTCACTACTAAGGAGCACCTTCTCCTAT 15 ATGGTTCCATCAAAGTTCCTCACTGGACTAAAAAGCAGCTCCACGAGGAAGTAAAAAGGACTTT AAAAGATACTGGACTATATAGCCATCGTCATAAGAGAGTTGGAACACTGTCAGGAGGCATGAAG AGGAAGTTATCTATATCCATAGCTCTCATTGGTGGATCAAGGGTAGTAATTTTGGATGAACCAT CTACTGGAGTTGACCCATGTTCTCGCCGAAGTATATGGGATGTTATATCCAAGAACAAAACTGC CAGAACAATCATTCTGTCAACGCACCACTTGGACGAGGCTGAAGTGCTGAGTGACCGCATCGCC 20 ${\tt TTCCTGGAGCAGGGTGGGCTTAGGTGCTGTGGGTCCCCATTTTACCTCAAGGAAGCCTTTGGCG}$ ${\tt ATGGGTATCACCTCACGCTTACCAAGAAGAAGAGTCCAAATTTAAATGCAAATGCAGTATGTGA}$ CACCATGGCCGTGACAGCAATGATCCAATCACATCTCCCCGAAGCCTACCTCAAGGAGGATATT GGGGGAGAGCTTGTTTATGTACTTCCTCCATTCAGCACCAAAGTCTCAGGGGGCCTACCTGTCAC TCCTACGGGCACTCGACAATGGCATGGGTGACCTCAACATCGGGTGCTACGGCATTTCAGATAC 25 CACCGTGGAGGAGGTCTTTCTGAACTTGACCAAAGAGTCACAAAAAAATAGTGCTATGAGTCTT GAGCACTTAACACAAAAGAAAATTGGGAATTCCAATGCCAATGGCATCTCAACTCCTGACGATT TATCTGTGAGCAGCAGCAATTTCACAGACAGAGATGACAAAATCCTGACAAGAGGAGAGAGGCT GGATGGCTTTGGACTGTTGCTGAAGAAGATCATGGCTATACTCATCAAGAGGTTCCACCACRCC CGCAGGAACTGGAAAGGTCTCATTGCTCAGGTTATCCTCCCCATCGTCTTTGTTACCACTGCCA 30 TGGGCCTTGGCACACTGAGAAATTCCAGCAACAGTTATCCAGAGATTCAGATCTCCCCCTCTCT TTATGGTACCTCCGAACAGACAGCCTTCTATGCTAATTATCACCCGAGCACGGAAGCACTTGTC ${\tt TCAGCAATGTGGGACTTCCCTGGAATTGACAACATGTGTCTGAACACCAGTGATCTACAGTGTT}$ TAAACAAAGACAGTCTGGAAAAATGGAACACCAGTGGAGAACCCATCACTAATTTTGGTGTTTG CTCCTGCTCAGAAAATGTCCAGGAATGTCCTAAATTTAACTATTCCCCACCGCACAGAAGAACT 35 TACTCATCCCAGGTAATTTATAACCTCACTGGGCAACGAGTGGAAAATTATCTTATATCAACTG CAAATGAGTTTGTCCAAAAAAGATATGGAGGTTGGAGTTTTGGGCTGCCTTTGACAAAAGACCT TCGTTTTGATATAACAGGAGTCCCTGCCAATAGAACACTTGCCAAGGTATGGTATGATCCAGAA GGCTATCACTCCCTTCCAGCTTACCTCAACAGCCTGAATAATTTCCTTCTGCGAGTTAACATGT CAAAATACGATGCTGCCCGACATGGCATCATCATGTATAGCCATCCTTATCCAGGAGTGCAAGA 40 ${\tt CCAAGAACAAGCCACAATCAGCAGTTTAATCGATATTTTAGTGGCACTGTCTATCTTGATGGGC}$ ${\tt GGTTTTCTACTTGGTGCCTGTAGCGTTTTCAATTGGTATCATTGCGATTTTCAAATTACCTGCA}$ ${\tt TTCTACAGTGAAAACAACCTAGGCGCTGTATCTCTCCTACTTCTCCTGTTTGGGCATGCAACAT}$ 45 ${\tt TTTCCTGGATGTACTTGCTGGCTGGGCTCTTCCATGAAACAGGAATGGCCTTCATCACTTACGT}$ AAGGAAAAGCCTAATGATCCGACTTTAGAACTTATTTCTGAAACCCTCAAGCGCATTTTCCTGA ${\tt TTTTCCCACAATTCTGTTTTGGCTACGGTTTGATTGAACTTTCTCAACAACAGTCGGTCCTAGA}$ CTTCTTAAAAGCATATGGAGTGGAATACCCAAATGAAACCTTTGAGATGAATAAACTAGGTGCA 50 ATGTTTGTGGCTTTGGTTTCTCAGGGCACCATGTTTTTTTCCTTGCGACTCTTAATCAACGAAT CCCTGATAAAGAAACTCAGGCTTTTCTTCAGAAAATTTAATTCTTCACATGTAAGGGAGACAAT AGATGAGGATGAAGATGTGCGGGCTGAGAGATTAAGAGTTGAGAGTGGTGCAGCTGAATTTGAC TTGGTCCAACTTTATTGTCTCACAAAGACCTACCAACTTATCCACAAAAAGATTATAGCTGTAA 55 AAAGACCACTATATTCAAGATGCTGACAGGAGACATCATTCCTTCAAGTGGAAACATTCTGATC ${\tt AGAAATAAGACCGGATCTCTGGGTCACGTTGATTCTCACAGCTCATTAGTTGGCTACTGTCCTC}$ ${f AGGAAGATGCCTTAGATGACCTGGTAACTGTGGAAGAACATTTGTATTCTATGCCAGGGTACA}$ TGGAATTCCAGAAAAGGATATTAAAGAAACTGTTCATAAACTCCTTAGGAGACTTCACCTGATG CCCTTCAAGGACAGAGCTACCTCTATGTGCAGTTATGGCACAAAAAGAAAATTATCCACTGCAC 60 ${\tt TGGCCTTGATAGGGAAACCTTCCATTCTACTGCTGGATGAGCCGAGCTCTGGCATGGATCCGAA}$ GTCGAAACGGCACCTCTGGAAGATCATTTCAGAAGAAGTACAGAACAAATGTTCCGTCATCCTC





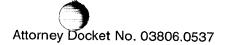


Figure 5:

SEQ ID NO: 4

GAAGAGTTGATTGAGAAGTGCCTCTTGGTTAAGGATTAACCACAGGGAAAAATCCAGCAGAAAC 5 AGAAGAACTGTGGGTTTCTTACCCCAGCCCTCAAGGAAGCTATGCCGTGAAAGGGGTACTGATA CACTGACATACAGCAAGTTGGACGGGGCATCAGTTCTTCATTTGTGGAGTGGAGAAAAGAAGAG ${ t GAAATCTCTCATTTGGGGCATTTGAAGG} { t ATG} { t GCTTCCCTGTTTCATCAGCTTCAGATCCTGGTC}$ ${f TGGAAAAATTGGCTAGGTGTAAAAAGGCAGCCGCTTTGGACACTTGTCTTGATCTTATGGCCAG}$ 10 TCATTATTTTCATAATTTTGGCTATTACTCGGACCAAATTTCCTCCAACTGCAAAACCAACTTG ${\tt TTACCTCGCACCTCGAAACCTTCCTAGTACTGGATTCTTTCCATTCCTGCAGACCCTACTCTGT}$ GACACAGACTCTAAATGCAAAGACACACCCTATGGCCCACAAGATCTGCTTCGTAGGAAAGGAA TTGATGATGCACTATTTAAAGACAGTGAGATTCTGAGAAAGTCATCCAACCTGGATAAGGACAG $\tt CCCAGTCCAAGTTCTGATTTGGAAATCCCCGGAACATATACTTTCAATGGCAGTCAAGTGCTCG$ 15 CACGAATTCTTGGCTTGGAAAAGCTGTTAAAGCAAAATTCAACTTCAGAAGATATACGAAGAGA ${ t ACTATGTGACAGCTATTCAGGATACATTGTGGATGATGCCTTCTCTTGGACCTTTCTAGGAAGA}$ AATGTTTTTAACAAATTTTGCCTTTCTAACATGACCCTTTTAGAGTCTTCTCTCCAAGAACTAA ACAAACAGTTCTCCCAGCTATCCAGTGACCCCAACAATCAGAAGATAGTGTTTCAGGAAATAGT CAGAATGCTGTCTTCTCTCACAAGTGCAAGAGCAGAAAGCTGTGTGGCAGCTTCTGTCTAGT TTTCCAAATGTGTTTCAGAATGACACATCACTAAGCAATCTATTTGATGTTCTTCGAAAGGCAA ${ t ACAGTGTGCTGCTGGTTGCAGAAGGTTTATCCACGTTTTGCAACTAACGAAGGTTTCAGAAC}$ CCTCCAGAAGTCTGTTAAACATCTGCTGTACACTCTGGACTCCCCAGCTCAAGGTGACTCCGAT AGCTCCTAATTCTGGAAAACTTTGAAGATGCCCTCTTAAATATATCAGCAAATAGTCCTTATAT 25 TCCTTACTTGGCATGTGTGAGAAATGTGACTGACAGTTTGGCCAGAGGTTCACCAGAAAATCTA ${f A}{f G}{f A}{f C}{f C}{f C}{f C}{f A}{f C}{f C}{f A}{f C}{f C}{f A}{f T}{f C}{f C}{f A}{f C}{f C}{f T}{f C}{f C}{f A}{f C}{f C}{f A}{f C}{f C}{f C}{f A}{f C}{f C}{f C}{f A}{f C}{f C}{f C}{f C}{f A}{f C}{f C}{f$ ACTTTCCTCCAGTTCCTGAAGTCCTAAAATCAAAACTGTCTCAACTTCGAAACTTGACCGAACT ${ t TCTTTGTGAATCTGAAACTTTCAGTTTGATAGAGAAGTCATGCCAGCTCTCTGATATGAGCTTTT}$ GGGAGCCTGTGTGAAGAAAGTGAGTTTGATCTGCAACTCCTCGAAGCGGCAGAGCTGGGCACCG AAATAGCAGCCAGCTTACTGTACCATGACAATGTCATATCTAAAAAAGTGAGAGATTTGCTGAC TACTTGGAAAATATCACTCAGTTAATACCGATCATAGAAGCCATGCTGCATGTCAATAACAGTG CAGATGCTTCTGAAAAGCCAGGTCAGTTACTAGAAATGTTTAAAAATGTTGAAGAGCTGAAAGA AGATTTAAGGAGAACAACAGGAATGTCCAACAGGACTATTGACAAGTTGCTGGCCATTCCCATC CCTGATAATAGAGCTGAGATTATTTCTCAGGTGTTCTGGCTGCATTCCTGTGATACTAATATCA CCACTCCCAAACTAGAAGATGCAATGAAAGAATTCTGCAACCTGTCTCTTTCAGAGAGATCCCG GCAGTCTTACCTCATCGGACTCACCCTTCTGCACTACTTAAACATTTACAACTTCACAGACAAG GTGTTTTTCCCGAGGAAAGATCAAAAGCCAGTAGAAAAGATGATGGAGCTCTTCATAAGACTAA AAGAGATTCTCAATCAGATGGCTTCTGGCACACATCCGCTGCTAGACAAAATGAGATCCCTGAA 40 GCAAATGCATCTGCCCAGAAGTGTTCCATTAACACAGGCAATGTACAGAAGCAACCGAATGAAC ACACCACAAGGATCATTTAGCACCATCTCCCAAGCATTATGTTCTCAAGGAATTACCACTGAAT ATTTAACTGCCATGCTGCCCTCTTCCCAGAGGCCAAAAGGCAACCACCAAGGATTTTTTGAC TTATAAATTAACTAAAGAGCAAATTGCTTCAAAATATGGAATTCCCATAAATACCACACCATTT TGCTTCTCCCTTTATAAAGACATCATTAACATGCCCGCTGGACCTGTGATTTGGGCTTTCTTGA 45 AACCTATGTTGTTGGGAAGAATTTTGCATGCACCATATAACCCAGTCACAAAGGCAATAATGGA AAGTCGCCACTTTTCATGAATTCCTTCCATCTGTTAAACCAGGCAATTCCAATGCTCCAGAATA ${ t CTCTAAGGAACCCTTTTGTGCAAGTTTTTGTAAAGTTCTCCGTGGGACTCGATGCTGTTGAACT}$ ATTGAAACAGATAGATGAACTCGATATTCTAAGACTGAAATTAGAGAACAACATTGACATCATC 50 GATCAGCTTAACACACTATCTTCCCTGACAGTAAATATTTCCTCTTGTGTATTATATGACCGTA ${\tt TTCAGGCAGCAAAAACCATAGATGAAATGGAGAGAGAGGCTAAAAAGGCTCTACAAAAGCAACGA}$ ACTCTTTGGAAGTGTTATTTTTAAGCTTCCTTCTAACAGAAGCTGGCACAGAGGCTATGACTCT GGAAATGTCTTTCTTCCTCCTGTCATAAAATATACCATCCGGATGAGTCTCAAGACCGCACAGA CCACAAGAAGCCTAAGAACCAAGATTTGGGCTCCAGGGCCACACAATTCTCCATCACAACCA 55 GATCTATGGCAGGGCTTTTATTTATTTACAGGATAGTATTGAAAGAGCAATCATTGAATTGCAA ACTGGAAGGAACTCCCAGGAAATAGCAGTCCAGGTTCAAGCAATTCCTTATCCCTGCTTCATGA AAGACAACTTCCTAACCAGTGTCTCTTATTCTCTTCCAATTGTGCTTATGGTTGCCTGGGTTGT ${\tt AAGATGATGGGTGTGAACTCCTGCAGCCATTTCTTTGCCTGGCTTATAGAGAGTGTTGGATTTT}$



 ${\tt TGGGTTCATTTGTTCCTGTATTTTTCGGACTACAGCTTCTCGGTTATTGCCATGAGCTATCTT}$ ATCAGTGTCTTCTTCAACAACACCCAACATTGCAGCTCTGATCGGAAGCCTCATCTACATCATTG ${\tt CCTTCTTTCCATTTATTGTTCTGGTTACAGTGGAGAATGAGTTGAGCTATGTATTGAAAGTGTT}$ CATGAGCCTGCTGTCCCCAACAGCATTCAGCTATGCAAGCCAATACATTGCACGATACGAAGAA ${ t CAGGGCATTGGTCTTCAGTGGGAAAATATGTACACCTCCCGGTTCAGGATGACACCACCTCAT}$ 5 ${ t TATTGGAAGGAGCGATTTGGGTGTGCAGAGGTGAAGCCTGAGAAGAGCAATGGCCTCATGTTTA}$ CTAACATCATGATGCAGAACACCAACCCATCTGCCAGTCCTGAATACATGTTTTCCTCTAACAT ${\tt CGAGCCTGAACCTAAAGATCTCACAGTCGGGGTTGCCCTGCATGGGGTCACAAAGATCTATGGC}$ 10 TCAAAAGTTGCTGTTGATAACCTCAATCTGAACTTTTATGAAGGGCATATTACTTCATTGCTGG AGGCACCATTTTTGTATATGGAAAAGATATCAAAACAGACCTACACACGGTACGGAAGAACATG GGAGTCTGTATGCAGCACGACGTCTTGTTCAGTTACCTCACTACTAAGGAGCACCTTCTCCTAT ATGGTTCCATCAAAGTTCCTCACTGGACTAAAAAGCAGCTCCACGAGGAAGTAAAAAGGACTTT 15 AAAAGATACTGGACTATATAGCCATCGTCATAAGAGAGTTGGAACACTGTCAGGAGGCATGAAG AGGAAGTTATCTATATCCATAGCTCTCATTGGTGGATCAAGGGTAGTAATTTTTGGATGAACCAT CTACTGGAGTTGACCCATGTTCTCGCCGAAGTATATGGGATGTTATATCCAAGAACAAAACTGC CAGAACAATCATTCTGTCAACGCACCACTTGGACGAGGCTGAAGTGCTGAGTGACCGCATCGCC ${ t TTCCTGGAGCAGGGTGGGCTTAGGTGCTGTGGGTCCCCATTTTACCTCAAGGAAGCCTTTGGCG}$ 20 ATGGGTATCACCTCACGCTTACCAAGAAGAAGGTCTTTCTGAACTTGACCAAAGAGTCACAAAA AAATAGTGCTATGAGTCTTGAGCACTTAACACAAAAGAAAATTGGGAATTCCAATGCCAATGGC ${f T}GACAAGAGGAGAGGGCTGGATGGCTTTGGACTGTTGCTGAAGAAGATCATGGCTATACTCAT$ CAAGAGGTTCCACCACGCCGCAGGAACTGGAAAGGTCTCATTGCTCAGGTTATCCTCCCCATC 25 GTCTTTGTTACCACTGCCATGGGCCTTGGCACACTGAGAAATTCCAGCAACAGTTATCCAGAGA ${\tt TTCAGATCTCCCCTCTTTTATGGTACCTCCGRACAGACAGCCTTCTATGCTAATTATCACCC}$ GAGCACGGAAGCACTTGTCTCAGCAATGTGGGACTTCCCTGGAATTGACAACATGTGTCTGAAC ${ t ACCAGTGATCTACAGTGTTTAAACAAAGACAGTCTGGAAAAATGGAACACCAGTGGAGAACCCA}$ 30 TCACTAATTTTGGTGTTTGCTCCTGCTCAGAAAATGTCCAGGAATGTCCTAAATTTAACTATTC CCCACCGCACAGAAGAACTTACTCATCCCAGGTAATTTATAACCTCACTGGGCAACGAGTGGAA AATTATCTTATATCAACTGCAAATGAGTTTGTCCAAAAAAGATATGGAGGTTGGAGTTTTGGGC TGCCTTTGACAAAAGACCTTCGTTTTGATATAACAGGAGTCCCTGCCAATAGAACACTTGCCAA GGTATGGTATGATCCAGAAGGCTATCACTCCCTTCCAGCTTACCTCAACAGCCTGAATAATTTC $\tt CTTCTGCGAGTTAACATGTCAAAATACGATGCTGCCCGACATGGCATCATCATGTATAGCCATC$ 35 $\tt CTTATCCAGGAGTGCAAGACCAAGACCAAGCCACAATCAGCAGTTTAATCGATATTTAGTGGC$ ACTGTCTATCTTGATGGGCTACTCTGTCACCACCGCCAGCTTTGTCACCTATGTTGTAAGGGAA CATCAAACCAAAGCCAAACAGTTGCAGCACATTTCAGGCATTGGCGTGACATGCTACTGGGTAA CAAACTTCATTTATGACATGGTTTTCTACTTGGTGCCTGTAGCGTTTTCAATTGGTATCATTGC GATTTTCAAATTACCTGCATTCTACAGTGAAAACAACCTAGGCGCTGTATCTCTCCTACTTCTC 40 TGGCCTTCATCACTTACGTCTGTGTCAACTTGTTTTTTGGCATTAATTCCATTGTTTCCCTGTC AGTGGTATACTTTCTTTCCAAGGAAAAGCCTAATGATCCGACTTTAGAACTTATTTCTGAAACC AACAACAGTCGGTCCTAGACTTCTTAAAAGCATATGGAGTGGAATACCCAAATGAAACCTTTGA 45 ${\tt GATGAATAAACTAGGTGCAATGTTTGTGGCTTTGGTTTCTCAGGGCACCATGTTTTTTTCCTTG}$ CGACTCTTAATCAACGAATCCCTGATAAAGAAACTCAGGCTTTTCTTCAGAAAATTTAATTCTT CACATGTAAGGGAGACAATAGATGAGGATGAAGATGTGCGGGCTGAGAGATTAAGAGTTGAGAG ${\tt TGGTGCAGCTGAATTTGACTTGGTCCAACTTTATTGTCTCACAAAGACCTACCAACTTATCCAC}$ AAAAAGATTATAGCTGTAAACAACATCAGCATCGGGATACCTGCTGGAGAGTGTTTTGGGCTTC 50 TTGGAGTGAATGGAGCAGGAAAGACCACTATATTCAAGATGCTGACAGGAGACATCATTCCTTC AAGTGGAAACATTCTGATCAGAAATAAGACCGGATCTCTGGGTCACGTTGATTCTCACAGCTCA ${\tt TTAGTTGGCTACTGTCCTCAGGAAGATGCCTTAGATGACCTGGTAACTGTGGAAGAACATTTGT}$ ATTTCTATGCCAGGGTACATGGAATTCCAGAAAAGGATATTAAAGAAACTGTTCATAAACTCCT 55 ${\tt TAGGAGACTTCACCTGATGCCCTTCAAGGACAGAGCTACCTCTATGTGCAGTTATGGCACAAAA}$ AGAAAATTATCCACTGCACTGGCCTTGATAGGGAAACCTTCCATTCTACTGCTGGATGAGCCGA GCTCTGGCATGGATCCGAAGTCGAAACGGCACCTCTGGAAGATCATTTCAGAAGAAGTACAGAA CAAATGTTCCGTCATCCTCACATCTCACAGCATGGAAGAATGTGAAGCTCTCTGTACCAGGTTG GCCATTATGGTGAATGGAAAGTTTCAATGTATTGGATCTTTGCAGCACATAAAGAGCAGGTTTG GACGAGGATTTACTGTCAAAGTTCACTTGAAGAATAACAAAGTGACCATGGAGACCCTCACAAA 60 GTTCATGCAGCTGCACTTTCCAAAAACATACTTAAAAAGATCAGCACCTCAGCATGCTAGAGTAT CATGTACCAGTCACAGCAGGAGGAGTCGCAAACATTTTTGATCTGCTGGAAACCAACAAGACTG



Attorney Docket No. 03806.0537

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ADTSSQGSTISVDSQDDQMES*



Figure 6:

5 SEQ ID NO: 5

MASLFHQLQILVWKNWLGVKRQPLWTLVLILWPVIIFIILAITRTKFPPTAKPTCYLAPRNLPSTG FFPFLQTLLCDTDSKCKDTPYGPQDLLRRKGIDDALFKDSEILRKSSNLDKDSSLSFQSTQVPERR HASLATVFPSPSSDLEIPGTYTFNGSQVLARILGLEKLLKQNSTSEDIRRELCDSYSGYIVDDAFS WTFLGRNVFNKFCLSNMTLLESSLQELNKQFSQLSSDPNNQKIVFQEIVRMLSFFSQVQEQKAVWQ 10 LLSSFPNVFQNDTSLSNLFDVLRKANSVLLVVQKVYPRFATNEGFRTLQKSVKHLLYTLDSPAQGD SDNITHVWNEDDGQTLSPSSLAAQLLILENFEDALLNISANSPYIPYLACVRNVTDSLARGSPENL RLLQSTIRFKKSFLRNGSYEDYFPPVPEVLKSKLSQLRNLTELLCESETFSLIEKSCQLSDMSFGS LCEESEFDLQLLEAAELGTEIAASLLYHDNVISKKVRDLLTGDPSKINLNMDQFLEQALQMNYLEN ITQLIPIIEAMLHVNNSADASEKPGQLLEMFKNVEELKEDLRRTTGMSNRTIDKLLAIPIPDNRAE 15 IISQVFWLHSCDTNITTPKLEDAMKEFCNLSLSERSRQSYLIGLTLLHYLNIYNFTDKVFFPRKDQ KPVEKMMELFIRLKEILNQMASGTHPLLDKMRSLKQMHLPRSVPLTQAMYRSNRMNTPQGSFSTIS QALCSQGITTEYLTAMLPSSQRPKGNHTKDFLTYKLTKEQIASKYGIPINTTPFCFSLYKDIINMP AGPVIWAFLKPMLLGRILHAPYNPVTKAIMEKSNVTLRQLAELREKSQEWMDKSPLFMNSFHLLNQ AIPMLQNTLRNPFVQVFVKFSVGLDAVELLKQIDELDILRLKLENNIDIIDQLNTLSSLTVNISSC 20 VLYDRIQAAKTIDEMEREAKRLYKSNELFGSVIFKLPSNRSWHRGYDSGNVFLPPVIKYTIRMSLK TAQTTRŠLRTKIWAPGPHNSPSHNQIYGRAFIYLQDSIERAIIELQTGRNSQEIAVQVQAIPYPCF MKDNFLTSVSYSLPIVLMVAWVVFĨAAFVKKLVYĒKDLRLHEYMKMMGVNSCSHFFĀWLIESVGFL LVTIVILIIILKFGNILPKTNGFILFLYFSDYSFSVIAMSYLISVFFNNTNIAALIGSLIYIIAFF PFIVLVTVENELSYVLKVFMSLLSPTAFSYASQYIARYEEQGIGLQWENMYTSPVQDDTTSFGWLC 25 CLILADSFIYFLIAWYVRNVFPGTYGMAAPWYFPILPSYWKERFGCAEVKPEKSNGLMFTNIMMQN $\verb|TNPSASPEYMFSSNIEPEPKDLTVGVALHGVTKIYGSKVAVDNLNLNFYEGHITSLLGPNGAGKTT|$ TISMLTGLFGASAGTIFVYGKDIKTDLHTVRKNMGVCMQHDVLFSYLTTKEHLLLYGSIKVPHWTK KQLHEEVKRTLKDTGLYSHRHKRVGTLSGGMKRKLSISIALIGGSRVVILDEPSTGVDPCSRRSIW DVISKNKTARTIILSTHHLDEAEVLSDRIAFLEQGGLRCCGSPFYLKEAFGDGYHLTLTKKKSPNL 30 $ilde{ ext{NANAVCDTMAVTAMIQSHLPEAYLKEDIGGELVYVLPPFSTKVSGAYLSLLRALDNGMGDLNIGCY}}$ GISDTTVEEVFLNLTKESQKNSAMSLEHLTQKKIGNSNANGISTPDDLSVSSSNFTDRDDKILTRG ERLDGFGLLLKKIMAILIKRFHHXRRNWKGLIAQVILPIVFVTTAMGLGTLRNSSNSYPEIQISPS LYGTSEQTAFYANYHPSTEALVSAMWDFPGIDNMCLNTSDLQCLNKDSLEKWNTSGEPITNFGVCS CSENVQECPKFNYSPPHRRTYSSQVIYNLTGQRVENYLISTANEFVQKRYGGWSFGLPLTKDLRFD ITGVPÄNRTLAKVWYDPEGYHSLPAYLNSLNNFLLRVNMSKYDAARHGIIMYSHPYPGVQDQEQAT ISSLIDILVALSILMGYSVTTASFVTYVVREHQTKAKQLQHISGIGVTCYWVTNFIYDMVFYLVPV ${ t AFSIGIIAIFKLPAFYSENNLGAVSLLLLLFGHATFSWMYLLAGLFHETGMAFITYVCVNLFFGIN}$ SIVSLSVVYFLSKEKPNDPTLELISETLKRIFLIFPQFCFGYGLIELSQQQSVLDFLKAYGVEYPN ETFEMNKLGAMFVALVSQGTMFFSLRLLINESLIKKLRLFFRKFNSSHVRETIDEDEDVRAERLRV 40 ${\tt ESGAAEFDLVQLYCLTKTYQLIHKKIIAVNNISIGIPAGECFGLLGVNGAGKTTIFKMLTGDIIPS}$ SGNILIRNKTGSLGHVDSHSSLVGYCPQEDALDDLVTVEEHLYFYARVHGIPEKDIKETVHKLLRR LHLMPFKDRATSMCSYGTKRKLSTALALIGKPSILLLDEPSSGMDPKSKRHLWKIISEEVQNKCSV ILTSHSMEECEALCTRLAIMVNGKFQCIGSLQHIKSRFGRGFTVKVHLKNNKVTMETLTKFMQLHF

PKTYLKDQHLSMLEYHVPVTAGGVANIFDLLETNKTALNITNFLVSQTTLEEVFINFAKDQKSYET



Figure 7:

SEQ_ID NO: 6

- 5 MASLFHQLQILVWKNWLGVKRQPLWTLVLILWPVIIFIILAITRTKFPPTAKPTCYLAPRNLPS
 TGFFPFLQTLLCDTDSKCKDTPYGPQDLLRRKGIDDALFKDSEILRKSSNLDKDSSLSFQSTQV
 PERRHASLATVFPSPSSDLEIPGTYTFNGSQVLARILGLEKLLKQNSTSEDIRRELCDSYSGYI
 VDDAFSWTFLGRNVFNKFCLSNMTLLESSLQELNKQFSQLSSDPNNQKIVFQEIVRMLSFFSQV
 QEQKAVWQLLSSFPNVFQNDTSLSNLFDVLRKANSVLLVVQKVYPRFATNEGFRTLQKSVKHLL
 YTLDSPAQGDSDNITHVWNEDDGQTLSPSSLAAQLLILENFEDALLNISANSPYIPYLACVRNV
 TDSLARGSPENLRLLOSTIRFKKSFLRNGSYEDVERPVDFYLKSKI SOLDNITTEL LOGSTERF
- TIBUSFAQGDSDNITHVWNEDDGQTLSPSSLAAQLLILENFEDALLNISANSPYIPYLACVRNV
 TDSLARGSPENLRLLQSTIRFKKSFLRNGSYEDYFPPVPEVLKSKLSQLRNLTELLCESETFSL
 IEKSCQLSDMSFGSLCEESEFDLQLLEAAELGTEIAASLLYHDNVISKKVRDLLTGDPSKINLN
 MDQFLEQALQMNYLENITQLIPIIEAMLHVNNSADASEKPGQLLEMFKNVEELKEDLRRTTGMS
 NRTIDKLLAIPIPDNRAEIISQVFWLHSCDTNITTPKLEDAMKEFCNLSLSERSRQSYLIGLTL
- 15 LHYLNIYNFTDKVFFPRKDQKPVEKMMELFIRLKEILNQMASGTHPLLDKMRSLKQMHLPRSVP
 LTQAMYRSNRMNTPQGSFSTISQALCSQGITTEYLTAMLPSSQRPKGNHTKDFLTYKLTKEQIA
 SKYGIPINTTPFCFSLYKDIINMPAGPVIWAFLKPMLLGRILHAPYNPVTKAIMEKSNVTLRQL
 AELREKSQEWMDKSPLFMNSFHLLNQAIPMLQNTLRNPFVQVFVKFSVGLDAVELLKQIDELDI
 LRLKLENNIDIIDQLNTLSSLTVNISSCVLYDRIQAAKTIDEMEREAKRLYKSNELFGSVIFKL
- 20 PSNRSWHRGYDSGNVFLPPVIKYTIRMSLKTAQTTRSLRTKIWAPGPHNSPSHNQIYGRAFIYL QDSIERAIIELQTGRNSQEIAVQVQAIPYPCFMKDNFLTSVSYSLPIVLMVAWVVFIAAFVKKL VYEKDLRLHEYMKMMGVNSCSHFFAWLIESVGFLLVTIVILIIILKFGNILPKTNGFILFLYFS DYSFSVIAMSYLISVFFNNTNIAALIGSLIYIIAFFPFIVLVTVENELSYVLKVFMSLLSPTAF SYASQYIARYEEQGIGLQWENMYTSPVQDDTTSFGWLCCLILADSFIYFLIAWYVRNVFPGTYG
- 25 MAAPWYFPILPSYWKERFGCAEVKPEKSNGLMFTNIMMQNTNPSASPEYMFSSNIEPEPKDLTV
 GVALHGVTKIYGSKVAVDNLNLNFYEGHITSLLGPNGAGKTTTISMLTGLFGASAGTIFVYGKD
 IKTDLHTVRKNMGVCMQHDVLFSYLTTKEHLLLYGSIKVPHWTKKQLHEEVKRTLKDTGLYSHR
 HKRVGTLSGGMKRKLSISIALIGGSRVVILDEPSTGVDPCSRRSIWDVISKNKTARTIILSTHH
- LDEAEVLSDRIAFLEQGGLRCCGSPFYLKEAFGDGYHLTLTKKKVFLNLTKESQKNSAMSLEHL

 TQKKIGNSNANGISTPDDLSVSSSNFTDRDDKILTRGERLDGFGLLLKKIMAILIKRFHHARRN
 WKGLIAQVILPIVFVTTAMGLGTLRNSSNSYPEIQISPSLYGTSXQTAFYANYHPSTEALVSAM
 WDFPGIDNMCLNTSDLQCLNKDSLEKWNTSGEPITNFGVCSCSENVQECPKFNYSPPHRRTYSS
 QVIYNLTGQRVENYLISTANEFVQKRYGGWSFGLPLTKDLRFDITGVPANRTLAKVWYDPEGYH
- SLPAYLNSLNNFLLRVNMSKYDAARHGIIMYSHPYPGVQDQEQATISSLIDILVALSILMGYSV
 TTASFVTYVVREHQTKAKQLQHISGIGVTCYWVTNFIYDMVFYLVPVAFSIGIIAIFKLPAFYS
 ENNLGAVSLLLLLFGHATFSWMYLLAGLFHETGMAFITYVCVNLFFGINSIVSLSVVYFLSKEK
 PNDPTLELISETLKRIFLIFPQFCFGYGLIELSQQQSVLDFLKAYGVEYPNETFEMNKLGAMFV
 ALVSQGTMFFSLRLLINESLIKKLRLFFRKFNSSHVRETIDEDEDVRAERLRVESGAAEFDLVQ
 LYCLTKTYQLIHKKIIAVNNISIGIPAGECFGLLGVNGAGKTTIFKMLTGDIIPSSGNILIRNK
- TGSLGHVDSHSSLVGYCPQEDALDDLVTVEEHLYFYARVHGIPEKDIKETVHKLLRRLHLMPFK
 DRATSMCSYGTKRKLSTALALIGKPSILLLDEPSSGMDPKSKRHLWKIISEEVQNKCSVILTSH
 SMEECEALCTRLAIMVNGKFQCIGSLQHIKSRFGRGFTVKVHLKNNKVTMETLTKFMQLHFPKT
 YLKDQHLSMLEYHVPVTAGGVANIFDLLETNKTALNITNFLVSQTTLEEVFINFAKDQKSYETA
 DTSSQGSTISVDSQDDQMES*